Research Note

Curving the resource curse: Negative effects of oil and gas revenue on nonviolent resistance campaign onset

Research and Politics
April-June 2020: 1–6

DOI: 10.1177/2053168020936890
journals.sagepub.com/home/rap
SAGE

Jonathan Pinckney

Abstract

There is growing consensus that large oil and gas revenues in autocracies have multiple pernicious effects, from decreasing democratization to increasing armed conflict: the so-called "resource curse." Yet we know little about the effects of oil and gas revenue on the onset of major nonviolent dissent. The logic of the resource curse would lead us to expect oil and gas revenue to significantly decrease the likelihood of nonviolent resistance, as resource wealth enables autocracies to increase repressive capacity and co-opt potential challengers. But this relationship has yet to be comprehensively tested. I show that such an effect obtains, but is more complex than previously theorized. Low levels of oil and gas revenue increase the likelihood of nonviolent resistance onset, while high levels decrease it. Despite popular assumptions and the general logic of the resource curse, oil only appears to drown out major nonviolent dissent at relatively high levels.

Keywords

resource curse, nonviolent resistance, oil, protests, democratization

Introduction

How does oil and gas revenue affect the onset of political contention in autocracies? There is growing consensus that petro-wealthy autocrats often struggle with violent challenges (Buhaug and Gates, 2002), but seem to easily suppress other forms of pressure for political change. The primary evidence for this comes from the democratization literature, which finds that oil revenue has increased authoritarian stability (Ross, 2001; Wright et al., 2015), particularly since the late 1970s (Andersen and Ross, 2014).[1]

Yet to date the literature has not directly considered the effects of oil revenue on the onset of nonviolent resistance campaigns (alternately referred to as civil resistance campaigns). This is a significant oversight, as nonviolent resistance campaigns in non-democracies, that is to say "a series of observable, continual tactics in pursuit of a political objective" performed by unarmed civilians outside institutional politics and without the use of physical violence (Chenoweth and Stephan, 2011: 12–14), have been a central force for democratic change in many of the political transitions of the last 70 years (Celestino and Gleditsch, 2013; Pinckney, 2018).

Some have speculated that oil wealth will "drown" nonviolent challenges (Ross, 2011), and recent research suggests that resource-rich states are better able to repress such challenges once they emerge (Girod et al., 2018; Kirisci and Demirhan, 2019), yet the effects of resource wealth on nonviolent campaign *onset* has yet to be tested. In this research note I perform the first systematic analysis of this relationship. While there appears to be no robust direct relationship between the two, careful modeling reveals a strong curvilinear negative relationship. While low levels of oil and gas revenue slightly increase the likelihood of campaign onset, higher levels reduce this probability to indistinguishable from zero.

Oil and nonviolent resistance campaigns

Why might we expect oil and gas revenue to affect nonviolent resistance campaign onset? The literature on nonviolent resistance campaigns in autocracies suggests that to succeed in defeating an autocratic regime, nonviolent resistance campaigns typically require three key elements:

United States Institute of Peace, USA

Corresponding author:
Jonathan Pinckney, United States Institute of Peace, 2301 Constitution Ave NW, Washington, DC 20037, USA.
Email: jpinckney@usip.org

the ability to mobilize a significant portion of the population (Chenoweth and Stephan, 2011; Thurber, 2019), elite divisions to undermine regime cohesion (Lichbach, 1998), and security force defection (Nepstad, 2011).

Oil and gas wealth should undermine all three of these elements. Oil wealth enables states to reduce taxation and increase social welfare spending, reducing grievances (Morrison, 2009; Tsui, 2010). Elite cohesion can be more easily maintained through patronage. And leaders can keep security forces loyal through increased military spending (Hendrix and Noland, 2014). These factors should in turn make petro-states difficult targets for nonviolent campaigns. Recent research supports this picture. Kirisci and Demirhan (2019) find that nonviolent campaigns become more likely to fail as a state's oil revenue increases, and Girod et al. (2018) show that campaign demobilization in response to repression becomes increasingly likely as the state's resource revenues increase.

Nor is this increased difficulty likely to be offset by the potential greater reward of seizing control of resource revenues—a factor frequently pointed to as an explanation for petro-states' higher rates of violent conflict (Rustad and Binningsbø, 2012)—since nonviolent campaigns require broad participation (Chenoweth and Stephan, 2011), typically have non-hierarchical structures (Nepstad, 2011), and rarely seize territory, making it more difficult for campaign leaders to later exclude others from state resources. Anticipating their likely failure, and with little to gain from victory, potential campaign entrepreneurs will face a heightened collective action problem in challenging state authority, and should thus be less likely to attempt to oppose the regime. This should lead to a lower base rate of nonviolent resistance campaign onset in oil- and gas-rich countries.

Other factors affect nonviolent resistance campaign onset. For example, Kurzman (2009) points out how "cognitive liberation" led participants in the Iranian Revolution to rise up even when objective conditions did not favor success, and Chenoweth and Ulfelder (2017) emphasize the importance of contingency in nonviolent resistance onset. While this may make identifying a significant relationship more challenging, insofar as these other factors have consistent empirical bases, they can be controlled for, and I have no reason to suspect that they should have any systematic relationship with oil and gas revenue.

Research design

To test the impact of oil and gas revenue on nonviolent resistance campaigns I crafted a dataset merging several existing sources. My unit of analysis is the country-year, with a population of all autocratic country-years from 1945 through 2013.[2] I used the "Regimes of the World" variable from the Varieties of Democracy Project (V-Dem) (Coppedge et al., 2018) to determine if a particular country-year was autocratic, excluding all country-years that V-Dem codes as democracies.

I exclude democracies because research shows that the pernicious effects of natural resources can largely be avoided through preexisting democratic institutions (Hendrix and Noland, 2014). In addition, while nonviolent resistance campaigns do occur in democracies, it is more difficult in these cases to unambiguously determine where nonviolent political opposition is non-institutional, and thus nonviolent resistance, or simply a variation of normal politics. This line is clearer in non-democracies.

My primary independent variable is per capita oil and gas rents, derived from Ross and Mahdavi (2015). This dataset contains per capita revenue from oil and gas for every country in the world from 1932 through 2014. I normalize the variable by taking the natural logarithm (plus one), and include both this logged term and its square to account for potential non-linear relationships.

My dependent variable is the onset of a major nonviolent resistance campaign. My data source on nonviolent campaign onset is the Nonviolent and Violent Campaigns and Outcomes (NAVCO) 2.1 dataset, from Chenoweth and Shay (2019). NAVCO 2.1 is an updated version of the widely used NAVCO 2.0 dataset (Chenoweth and Lewis, 2013), which contains campaign-year data on every nonviolent or violent campaign from 1945 to 2013. Nonviolent campaigns are identified based on the definition of nonviolent resistance provided above, and must also have had at least 1000 observed participants and "maximalist" goals of regime change, secession, or expulsion of foreign occupation. Thus my analysis only pertains to challenges of this scope and intensity. NAVCO 2.1 includes a total of 384 campaigns, of which 183 were primarily nonviolent for at least one year. Some campaigns in NAVCO have onsets in the same country-year. After accounting for duplicate onset years, my dataset is left with a total of 142 nonviolent campaign onsets.

I control for many of the best-established confounding variables that may affect nonviolent resistance onset (Chenoweth and Ulfelder, 2017; Gleditsch and Rivera, 2017), but following best practice as suggested by Achen (2005) maintain a parsimonious model. I draw all control variables from the Varieties of Democracy dataset (Coppedge et al., 2018), unless otherwise specified. I control for population (logged), gross domestic product (GDP) per capita (logged), whether the country-year in question was an election year, and a measure of the protection of physical integrity rights, as well as the number of years the current leader has been in office according to the Archigos dataset (Goemans et al., 2009), the number of groups excluded from power according to the Ethnic Power Relations (EPR) dataset (Vogt et al. 2015), whether the country is a signatory to the optional first protocol of the International Covenant on Civil and Political Rights (ICCPR), as coded by Chenoweth and Ulfelder (2017), and whether NAVCO 2.1 reports an already ongoing nonviolent resistance campaign.[3]

My primary modeling strategy is logistic regression since my dependent variable is binary. I run all logistic

Table 1. Summary statistics.

Statistic	*N*	Mean	St. dev.	Min	Max
Oil revenue (log)	5562	2.377	2.993	0.000	11.159
Nonviolent campaign onset	7438	0.019	0.137	0	1
Population (log)	6989	15.352	1.783	10.094	21.029
GDP per capita (log)	6051	7.993	0.993	4.898	12.305
Regional contagion	7438	1.113	1.695	0	11
Election year	7438	0.215	0.411	0	1
Ongoing nonviolent campaign	7438	0.054	0.225	0	1
Leader years (log)	5933	2.028	0.848	0.693	4.025
Excluded EPR groups (log)	7438	0.740	0.793	0	4
Physical integrity rights	7438	0.383	0.241	0.013	0.985
ICCPR signatory	4649	0.186	0.389	0.000	1.000

EPR: Ethnic Power Relations.

Table 2. Nonviolent onset and oil/gas revenue cross-tabulations.

Nonviolent onset	Mean revenue	Median revenue
No	972.885	0.379
Yes	174.491	14.005

regression models with standard errors clustered by country to address non-independence of observations in the same country, and include cubic polynomials of the number of years since the last nonviolent resistance campaign onset to address potential temporal dependencies (Carter and Signorino, 2010).

There are likely significant time-invariant differences in propensity for campaign onset across countries. However, since many countries in the dataset never experience an onset, using country fixed-effects would entail dropping a large number of observations. Thus, I run an additional mixed-effects model with random intercepts at the country level to address these differences. I lag all independent and control variables one year to address potential reverse causality. Table 1 contains summary statistics on all my variables.

Results

Descriptively breaking down the data yields conflicting insights. As shown in Table 2, while the mean oil and gas revenue per capita is significantly higher in country-years without nonviolent resistance campaign onsets, this difference appears to be driven primarily by outliers (predominately the small resource-rich Gulf countries), as the relationship reverses when comparing the two groups' medians.

Table 3 contains the results of my primary regression tests, which help explain these differences. As shown in Model 1, the logged measure of oil and gas revenue on its own does not have a significant relationship with nonviolent resistance campaign onset, even in a simple bivariate model. However, when including the squared revenues, the relationship becomes highly significant. This combination is significant when including the full suite of control variables (Model 3), time polynomials (Model 4), and random country-intercepts (Model 5).

Figure 1 plots the predicted probability of nonviolent resistance campaign onset across the range of oil and gas revenues, with all the control variables held at their means.[4] The graph clearly shows the curvilinear relationship between oil and gas revenue and campaign onset. Low levels of oil and gas revenue slightly increase the likelihood of campaign onset, but as these revenues increase the probability significantly drops, approaching zero at very high levels.

In the Online Appendix, I report the results of several robustness checks. First, I replicate all models as linear probability models, with substantially identical results. Second, Andersen and Ross (2014) suggest that the resource curse has become particularly salient since transformations of the international oil market in the 1970s. Thus, I rerun all models on all country-years from 1980 to 2013. The results are substantively identical and slightly stronger than in the primary tests, suggesting that Andersen and Ross's thesis about the increasing influence of the resource curse also applies to nonviolent resistance campaign onset. I also run additional tests including regional fixed effects, a measure of manufacturing as a percentage of GDP, and a count of previous failed nonviolent campaigns. Results are substantively identical across all tests. Some tests indicate a significant negative linear relationship between resource rents and campaign onset, but the curvilinear model has consistently superior model fit.

Discussion and conclusion

In this research note I have found that oil and gas wealth appears to deter the onset of nonviolent challengers, but only at relatively high levels. This fits well with existing literature on the effects of oil and gas wealth on authoritarian stability

Table 3. Regression analysis of oil and gas and nonviolent resistance onset.

	Dependent variable				
	Nonviolent campaign onset				
	Logistic				Generalized linear mixed-effects
	(1)	(2)	(3)	(4)	(5)
Oil/gas revenue (log)	0.028	0.533***	0.278	0.260	0.453*
	(0.035)	(0.115)	(0.152)	(0.150)	(0.184)
Oil/gas revenue (log) sq		−0.071***	−0.064**	−0.061**	−0.090***
		(0.017)	(0.019)	(0.020)	(0.026)
Population (log)			0.431***	0.406***	0.487***
			(0.103)	(0.098)	(0.144)
GDP per capita (log)			0.623***	0.647***	0.730***
			(0.186)	(0.186)	(0.202)
Regional contagion			0.229***	0.213***	0.259***
			(0.040)	(0.040)	(0.050)
Election year			0.186	0.162	0.142
			(0.203)	(0.206)	(0.250)
Ongoing campaign			−0.750	−1.262	−1.132*
			(0.576)	(0.675)	(0.479)
Leader years in power (log)			0.239	0.278*	0.398**
			(0.129)	(0.134)	(0.154)
EPR excluded groups (log)			−0.094	−0.105	−0.195
			(0.178)	(0.166)	(0.217)
Physical integrity rights			−0.431	−0.613	−0.754
			(0.551)	(0.541)	(0.639)
ICCPR signatory			0.704**	0.630*	0.805**
			(0.269)	(0.266)	(0.307)
Constant	−3.851***	−4.139***	−16.520***	−15.465***	−18.890***
	(0.138)	(0.170)	(2.265)	(2.183)	(2.909)
Time Polynomials?	No	No	No	Yes	Yes
Observations	5560	5560	4258	4258	4258
Log likelihood	−593.729	−580.188	−427.679	−425.367	−420.694
Akaike inf. crit.	1191.458	1166.377	879.358	880.735	873.388

Note: *$p<0.05$; **$p<0.01$; ***$p<0.001$.

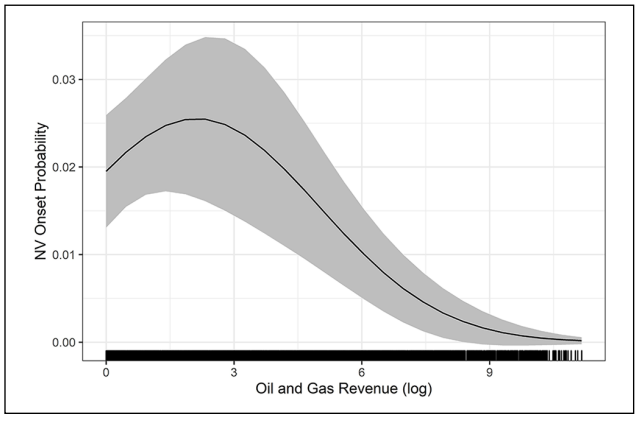

Figure 1. Predicted probability of nonviolent resistance onset.

(Colgan, 2015), and suggests that one reason why oil and gas wealth may be so conducive to authoritarian regime longevity is its ability to head off nonviolent challenges.

While I have suggested plausible mechanisms to explain this effect, based on the existing resource curse literature, detailed testing of these mechanisms is a question I leave for future research. In particular, tracing the mechanisms of this research note's most novel contribution—the curvilinear nature of this relationship—is a puzzle that will require further work.

One possible explanation may be the countervailing effects of oil and gas revenue at low levels facilitating economic growth, which may increase the likelihood of nonviolent resistance campaign onset (White et al., 2015) while not yet triggering the more significant impacts of the resource curse on a country's political and economic structures.

In short, evidence suggests that oil may indeed "drown" nonviolent challenges (Ross, 2011), but only at a high level of revenue per capita. Opportunities for dissent may be more prevalent than a simple interpretation of the resource curse would lead one to believe.

Acknowledgements

Thanks to Jeff Colgan, Rachel Epstein, Cullen Hendrix, Vally Koubi, the editors of *Research and Politics*, two anonymous reviewers, and all those who offered comments at presentations of early versions of this paper at the International Studies Association and European Political Science Association annual conferences.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Jonathan Pinckney https://orcid.org/0000-0002-8427-7423

Supplemental materials

The supplemental files are available at http://journals.sagepub.com/doi/suppl/10.1177/2053168020936890
The replication files are available at https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/4TKUSP
http://rap.sagepub.com/content/by/supplemental-data

Notes

1. Though Haber and Menaldo (2011) contest this.
2. See Tables 5–9 in the Online Appendix for a complete list of country-years.
3. Multiple campaigns can be ongoing in the same country, thus I treat this as a control variable rather than an exclusion condition.
4. Graph generated using predicted probabilities from Model 4.

Carnegie Corporation of New York Grant

The open access article processing charge (APC) for this article was waived due to a grant awarded to Research & Politics from Carnegie Corporation of New York under its 'Bridging the Gap' initiative.

References

Achen CH (2005) Let's put garbage-can regressions and garbage-can probits where they belong. *Conflict Management and Peace Science* 22(4): 327–339.

Andersen JJ and Ross ML (2014) The big oil change: A closer look at the Haber–Menaldo analysis. *Comparative Political Studies* 47(7): 993–1021.

Buhaug H and Gates S (2002) The geography of civil war. *Journal of Peace Research* 39(4): 417–433.

Carter DB and Signorino CS (2010) Back to the future: Modeling time dependence in binary data. *Political Analysis* 18(3): 271–292.

Celestino MR and Gleditsch KS (2013) Fresh carnations or all thorn, no rose? Nonviolent campaigns and transitions in autocracies. *Journal of Peace Research* 50(3): 385–400.

Chenoweth E and Lewis OA (2013) Unpacking nonviolent campaigns: Introducing the NAVCO 2.0 dataset. *Journal of Peace Research* 50(3): 415–423.

Chenoweth E and Shay C (2019) NAVCO 2.1 Dataset. https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/MHOXDV.

Chenoweth E and Stephan MJ (2011) *Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict*. New York: Columbia University Press.

Chenoweth E and Ulfelder J (2017) Can structural conditions explain the onset of nonviolent uprisings? *Journal of Conflict Resolution* 61(2): 298–324.

Colgan JD (2015) Oil, domestic conflict, and opportunities for democratization. *Journal of Peace Research* 52(1): 3–16.

Coppedge M, Gerring J, Knutsen CH, et al. (2018) *V-Dem Country.Year Dataset V8*. Gothenburg, Sweden: Varieties of Democracy (V-Dem) Project.

Girod DM, Stewart MA and Walters MR (2018) Mass protests and the resource curse: The politics of demobilization in rentier autocracies. *Conflict Management and Peace Science* 35(5): 503–522.

Gleditsch KS and Rivera M (2017) The diffusion of nonviolent campaigns. *Journal of Conflict Resolution* 61(5): 1120–1145.

Goemans HE, Gleditsch KS and Chiozza G (2009) Introducing Archigos: A dataset of political leaders. *Journal of Peace Research* 46(2): 269–283.

Haber S and Menaldo V (2011) Do natural resources fuel authoritarianism? A reappraisal of the resource curse. *American Political Science Review* 105(1): 1–26.

Hendrix CS and Noland M (2014) *Confronting the Curse: The Economics and Geopolitics of Natural Resource Governance*. Washington, DC: Peterson Institute for International Economics.

Kirisci M and Demirhan E (2019) Resource wealth as leverage: Natural resources and the failure of non-violent campaigns. *Government and Opposition*. Epub ahead of print 10 April. https://doi.org/10.1017/gov.2019.10

Kurzman C (2009) *The Unthinkable Revolution in Iran*. Cambridge, MA: Harvard University Press.

Lichbach MI (1998) *The Rebel's Dilemma*. Ann Arbor, MI: University of Michigan Press.

Morrison KM (2009) Oil, nontax revenue, and the redistributional foundations of regime stability. *International Organization* 63(1): 107–138.

Nepstad SE (2011) *Nonviolent Revolutions: Civil Resistance in the Late 20th Century*. New York: Oxford University Press.

Pinckney J (2018) *When Civil Resistance Succeeds: Building Democracy after Popular Nonviolent Uprisings*. Washington, DC: ICNC Press.

Ross M and Mahdavi P (2015) Oil and gas data, 1932–2014. http://dx.doi.org/10.7910/DVN/ZTPW0Y.

Ross ML (2001) Does oil hinder democracy? *World politics* 53(3): 325–361.

Ross ML (2011) Will oil drown the Arab Spring? Democracy and the resource curse. *Foreign Affairs* 90(5): 2–7.

Rustad SA and Binningsbø HM (2012) A price worth fighting for? Natural resources and conflict recurrence. *Journal of Peace Research* 49(4): 531–546.

Thurber C (2019) Social ties and the strategy of civil resistance. *International Studies Quarterly* 63(4): 974–986.

Tsui KK (2010) Resource curse, political entry, and deadweight costs. *Economics & Politics* 22(3): 471–497.

Vogt M, Bormann NC, Rüegger S, et al. (2015) Integrating data on ethnicity, geography, and conflict: The ethnic power relations data set family. *Journal of Conflict Resolution* 59(7): 1327–1342.

White PB, Vidovic D, González B, et al. (2015) Nonviolence as a weapon of the resourceful: From claims to tactics in mobilization. *Mobilization: An International Quarterly* 20(4): 471–491.

Wright J, Frantz E and Geddes B (2015) Oil and autocratic regime survival. *British Journal of Political Science* 45(2): 287–306.